

ABSTRACT

A micromechanical sensor and a method for manufacturing same are described. A secure diaphragm restraint, independent of fluctuations in the cavern etching process due to the process technology, and a free design of the diaphragm are made possible by designing a suitable connection of the diaphragm in an oxide layer created by local oxidation. The micromechanical sensor includes, for example, a substrate, an external oxide layer formed in a laterally external area in the substrate, a diaphragm having multiple perforation holes formed in a laterally internal diaphragm area, a cavern etched in the substrate beneath the diaphragm, whereby the diaphragm is suspended in a suspension area of the external oxide layer which tapers toward connecting points of the diaphragm and the diaphragm is situated in its vertical height between a top side and a bottom side of the external oxide layer.